



***Onigocia sibogae*, a replacement name for a distinct species of flathead fish, *Platycephalus grandisquamis* Weber, 1913 (Teleostei: Platycephalidae)**

HISASHI IMAMURA

Laboratory of Marine Biology and Biodiversity (Systematic Ichthyology), Faculty of Fisheries Sciences, Hokkaido University, 3-1-1 Minato-cho, Hakodate, Hokkaido 041-8611, Japan. E-mail: imamura@fish.hokudai.ac.jp

Abstract

A replacement name, *Onigocia sibogae*, is given for a platycephalid fish, *Platycephalus grandisquamis* Weber, 1913, being preoccupied by *Platycephalus grandisquamis* Regan, 1908. Although this species has been considered to be conspecific with *Onigocia oligolepis* (Regan, 1908), it was revealed that its five extant syntypes include three species and one of them is a distinct species from congeners of the genus, including *O. oligolepis*. To avoid taxonomic confusion, the lectotype (ZMA 112434, 51.2 mm SL) of *O. sibogae* is designated here. *Onigocia sibogae* differs from seven congeners in having usually I+VII-11 dorsal and 11 anal fin rays, eight caudal fin rays, 30–31 lateral line scales, anterior two or three scales with spine, three scales between second dorsal fin and lateral line, no ocular and interopercular flaps, upper iris lappet usually finely crenate, two or three antrorse lachrymal spines, usually no spines on the inner ridge of the lachrymal, 2–5 preocular spines, no notch on the suborbital ridge below the eye, suborbital ridge serrated by 16–26 small spines, and 2–4 distinct blackish spots on middle and posterior portions of the pelvic fin rays.

Key words: *Onigocia sibogae*, **nom. nov.**, *Onigocia grandisquama* (Weber), Platycephalidae, lectotype

Introduction

Platycephalus grandisquamis was originally described by Weber (1913) based on six specimens collected from the Ceram Sea, near New Guinea. However, this species is a primary homonym of *Platycephalus grandisquamis* Regan, 1908 and is permanently invalid. De Beaufort (1956) established *Platycephalus horai* based on two of the six specimens. Subsequently, de Beaufort & Briggs (1962) considered *P. grandisquamis* Weber as conspecific with *Onigocia oligolepis* (Regan, 1908). In this study, I examined five extant syntypes of *P. grandisquamis* Weber. Of them, two syntypes (ZMA 112435), redesignated as syntypes of *Platycephalus horai* de Beaufort, 1956, is identical with *Thysanophrys celebica* (Bleeker, 1854) (see also Knapp, 1986) and one [ZMA 124954 (formerly ZMA 112434)] with *Onigocia grandisquama* (Regan). It was also revealed that the remaining two syntypes [ZMA 112434 and ZMA 124953 (formerly ZMA 112434)] belong to the genus *Onigocia* in having 30 lateral line scales and serrated suborbital ridge (see Imamura, 1996 for definition of *Onigocia*) (Fig. 1). However, they differ from all other congeners of *Onigocia* and are concluded to be a distinct species of the genus, although Knapp *et al.* (1999) identified them as *O. pedimacula*. To avoid taxonomic confusion, a new replacement name is given to the species and the lectotype of the species is designated here, and this species is redescribed based on the two types and additional 20 specimens collected from around Australia (Fig. 2).

Material and methods

Counts and measurements were made according to Imamura (2008). Measurements were made with calipers to the nearest 0.1 mm accuracy. Terminology of head spines follows Knapp *et al.* (2000). Inner, middle and outer ridges of lachrymal are three ridges on the anterior portion of the lachrymal (Fig. 3). Institutional acronyms are from Eschmeyer (1998), except for Hokkaido University Museum, Hakodate (HUMZ), National Institute of Coastal

Aquaculture, Thailand (NICA), National Museum of Nature and Science, Tokyo (NSMT) and Natural History Museum and Institute, Chiba (CMNH). Standard, total and head lengths are abbreviated as SL, TL and HL, respectively.

***Onigocia sibogae* nomem novum**

(Figures 1–3)

Platycephalus grandisquamis Weber, 1913: 509, fig. 108 (original description, type locality: New Guinea, primary junior homonym of *Platycephalus grandisquamis* Regan, 1908).

Platycephalus oligolepis (nec Regan, 1908): de Beaufort & Briggs, 1962: 146, fig. 36 (description, off northwest of New Guinea) (in part).

Onigocia pedimacula (nec Regan, 1908): Knapp *et al.*, 1999: 8 (comparative material, north of New Guinea and Arafura Sea) (in part).

Lectotype (designated here): ZMA 112434 (51.2 mm SL), Ceram Sea, northwest of New Guinea (1°42.5'S, 130°47.5'E), 32 m depth, Siboga stn. 164.

Paralectotype (1 specimen): ZMA 124953 (53.5 mm SL, formerly ZMA 112434), coll. with lectotype.

Non-types (20 specimens): AMS I.20751-026 (53.2 mm SL), 3 miles northwest of Lizard Island, Queensland (14°38'S, 145°24'E), 9 m depth, 8 Feb. 1979, prawn trawl; AMS I.21842-030 (5 specimens, 39.1–61.4 mm SL, identified with *O. pedimacula* by Knapp *et al.*, 1999), Arafura Sea (10°37'S, 133°47'E), 60 m depth, 16 Nov. 1980, coll. FRV Solea; AMS I.27522-002 (58.5 mm SL), Bowen, Abbot Point, Queensland (19°53'S, 148°05'E), 1988; AMS I.34398-005 (59.9 mm SL), adjacent to West Flat, Port Clinton, South Arm Channel, Queensland (22°33.23'S, 150°45.42'E), 11 m depth, 25 Oct. 1993, sand and silt; BSKU 16929 (60.4 mm SL), BSKU 16930 (48.8 mm SL), BSKU 16932 (41.4 mm SL), Timor Sea, 24 June 1972, coll. R/V Hakuho-maru; NTM S.14362-009 (57.7 mm SL), northwest of West Holothuria Reef, Western Australia (13°25.22'S, 125°39.3'E), 50 m depth, 2 June 1996; QM I.22077 (61.6 mm SL), Queensland (22°40'S, 153°35'E), 6 Sept. 1983; QM I.26853 (70.9 mm SL), Warrior Reefs, Torres Strait, Queensland, 27 March 1990; QM I.35257 (65.7 mm SL), southeast of Fitzroy Island, Queensland (16°59.1'S, 146°64'E), 1 Oct. 2003, dredge; QM I.35629 (48.4 mm SL), northeast of Magnetic Island, Queensland (18°58.5'S, 146°56.1'E), 18 Sept. 2003, dredge; QM I.35863 (55.1 mm SL), east of Bax Reef, Queensland (20°19.5'S, 150°27.9'E), 64 m depth, 5 Dec. 2003, dredge; QM I.35972 (2 specimens, 43.5–46.1 mm SL), QM I.36023 (65.9 mm SL), east of Cape Bowling Green, Queensland (19°14.1'S, 147°38.7'E), 30 m depth, 24 Nov. 2003, dredge.

Diagnosis. A species of *Onigocia* with usually I+VII-11 dorsal and 11 anal fin rays, eight caudal fin rays, 30–31 lateral line scales, anterior two or three scales with a spine, three scales between second dorsal fin and lateral line, no ocular and interopercular flaps, upper iris lappet usually finely crenate, two or three antrorse lachrymal spines, usually no spines on the inner ridge of the lachrymal, 2–5 preocular spines, no notch on the suborbital ridge below the eye, suborbital ridge serrated by 16–26 small spines, and 2–4 distinct blackish spots on middle and posterior portions of pelvic fin rays.

Description. Counts and proportional measurements are given in Table 1. Data of the following description are presented first for all specimens, then for the lectotype in parentheses.

Body depressed, mostly covered with ctenoid scales, some cycloid scales on undersurface. Head flattened; postorbital region, opercle and nape scaled. Snout slender, slightly longer than eye diameter. Upper surface of eye without papillae and ocular flaps. Upper iris lappet finely crenate, rarely absent (finely crenate in lectotype); lower iris lappet broad and bilobed (Fig. 3B). Interorbit narrow and concave. Top and side of head bearing spines and serrated ridges (Fig. 3A). Nasal with one pair of small spines. One or two ethmoid spines present (one on both sides). Lachrymal usually with two or rarely with three distinct antrorse spines (two). Anterior portion of lachrymal with inner, middle and outer ridges; middle and outer ridges ending in lachrymal spine anteriorly. Three lachrymal ridges usually lacking spines, only right side of inner ridge with single spine on posterior end in one specimen, QM I.36023 (lacking spines). Two to five sharp preocular spines present (two on left and four on right), sometimes one or two inner spines with small spine basally (two spines on right side with single spine basally, respectively). Distinct preorbital spines absent. Suborbital ridge finely serrated, comprised of 16–26 small spines, tending to increase with growth (20 on both sides) (Fig. 4); no notch on suborbital ridge below eye. Supraorbital ridge finely serrated

except for anterior portion, continuous with frontal spines posteriorly. Postorbital region with several small spines. Pterotic with two to five spines, usually two or three (three on both sides). One parietal spine present. Supratemporal, posttemporal and supracleithrum usually with one spine, respectively, sometimes two spines on supratemporal and posttemporal (supratemporal on right side with two spines, that on left side and posttemporal on both sides with one spine). Preopercle with three spines; uppermost longest, not reaching posterior margin of opercle, usually bearing single supplemental spine, rarely supplemental spine absent (present on right side, absent on left side); lowermost smallest. Base of upper and lower opercular spines without serrations. Interopercular flap absent. Maxilla beyond anterior margin of eye. All teeth villiform; teeth in bands on jaws and palatine, and in two separate patches on vomer; tooth band on upper jaw with notch medially. Lip margins without papillae. Sensory tubes from suborbitals and preopercle well developed, completely covering cheek region. Pored scales in lateral line with two exterior openings posteriorly. First dorsal fin originating slightly anterior to opercular margin. First and second dorsal fin narrowly separated. Pectoral fin rounded posteriorly (damaged). Posterior tip of pelvic fin attaining base of second to fourth (third) anal fin ray. Caudal fin mostly straight posteriorly (damaged).

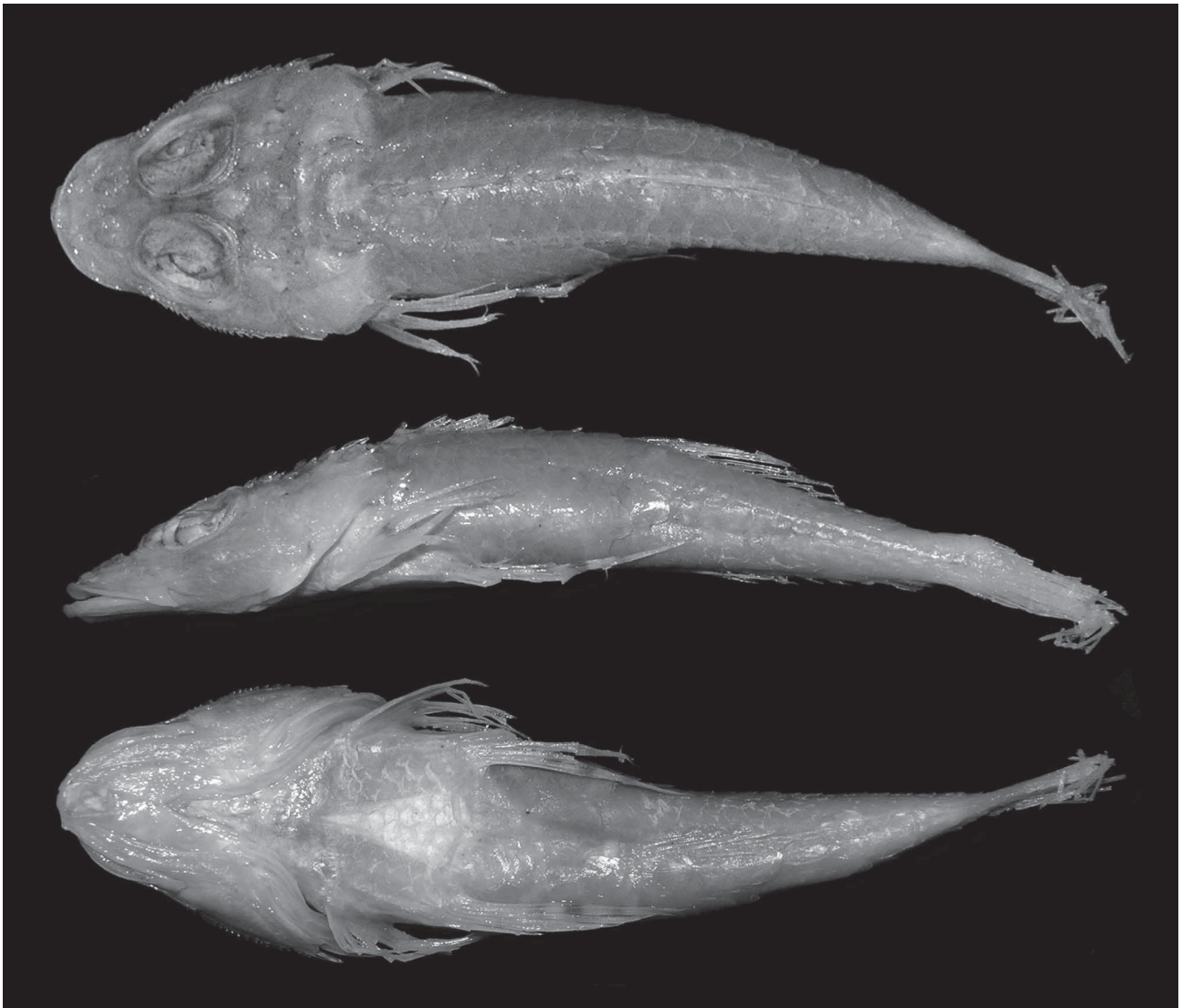


FIGURE 1. Dorsal (upper), lateral (middle) and ventral (lower) views of *Onigocia sibogae*, lectotype, ZMA 112434, 51.2 mm SL, collected from Ceram Sea, northwest of New Guinea.

Color in alcohol. In non-types (Fig. 2), ground color of body and head light brown above, paler below. Body with two indistinct saddle-like brownish bands; one below first dorsal fin and one below posterior portion of second, respectively. Lateral side of body below anterior portion of second dorsal fin with indistinct brownish blotch. Indistinct brown spot below eye. Distinct brown spot near preopercular spines. First dorsal fin with one broad dark

brown band distally, with small paler or transparent areas along spines. Second dorsal fin with scattered melanophores and several small brown spots. Pectoral fin light brown, with small brown spots tending to form narrow bands. Pelvic fin light brown, with two to four distinct blackish spots serially arranged on middle and posterior portions. Base of pelvic fin with melanophores. Anal fin pale, sometimes with several melanophores posteriorly. Caudal fin with many distinct or indistinct small brownish spots, tending to form narrow bands. Indistinct brownish patch on base of caudal fin.

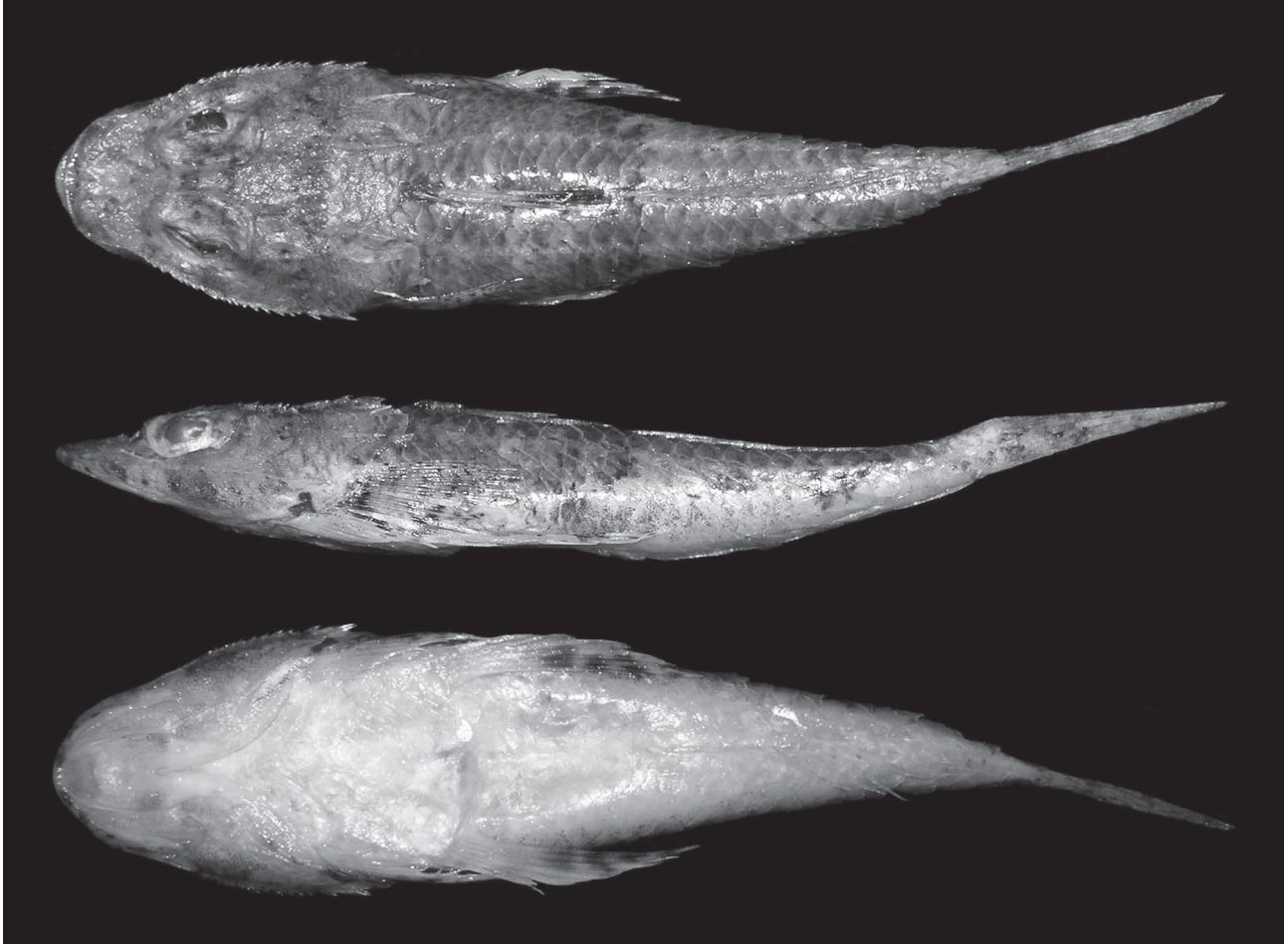


FIGURE 2. Dorsal (upper), lateral (middle) and ventral (lower) views of *Onigocia sibogae*, AMS I.34398-005, 59.9 mm SL, collected from Queensland, Australia.

In lectotype (Fig. 1), color mostly faded at present. Three brownish spots retained on middle and posterior portions of pelvic fin.

Distribution. Known from the Ceram, Arafura, Timor and Coral seas, at depths of 9–64 m.

Etymology. The name is based on the vessel Siboga, the vessel used in the Siboga Expedition, in which the type specimens of the present species were collected.

Remarks. *Platycephalus grandisquamis* Weber, 1913 was originally described based on six syntypes and five of them are in existence at present (Weber, 1913; de Beaufort, 1956; Neijssen *et al.*, 1982). Of the five specimens, two (ZMA 112435, 32.1–53.1 mm SL) were also designated as the syntypes of *Platycephalus horai* de Beaufort, 1956. However, *Platycephalus horai* is identical with *Thysanophrys celebica* (Bleeker, 1854) by having 12 second dorsal and 13 anal fin rays, 50 or more lateral line scales, upper iris lappet shortly branched, a single small papilla on the posterior half of the upper surface of the eye, the suborbital ridge with 6–8 spines, including 2–3 preorbital spines, and a single preocular spine (see also Knapp, 1986 for its synonymy). One specimen, ZMA 124954 (formerly ZMA 112434, 40.2 mm SL), can be identified with *O. grandisquama* (Regan) by having characters such as I+VIII-11 dorsal and 11 anal fin rays, 34 lateral line scales, a single short ocular flap, lachrymal with two antrorse spines, and suborbital ridge finely serrated and without a distinct notch below the eye (see Imamura & McGrouther,

2008 for its taxonomic characters). The remaining two syntypes, ZMA 112434 (51.2 mm SL) and ZMA 124953 (formerly ZMA 112434, 53.5 mm SL), are identical with *Onigocia* in having 30 lateral line scales and finely serrated suborbital ridge. However, it is concluded that the two syntypes are easily separable from other members of *Onigocia* and belong to a distinct species (see below for comparison with other species of *Onigocia*). *Platycephalus grandisquamis* Weber, 1913 is a primary homonym of *Platycephalus grandisquamis* Regan, 1908 and is permanently invalid (ICZN, 1999: Art. 57.2). Following ICZN (1999: Art. 60.3), a new replacement name, *Onigocia sibogae*, is proposed for the former name in this study. In addition, because the syntypes of *O. sibogae* include three species, the lectotype of *O. sibogae* should be designated to avoid taxonomic confusion.

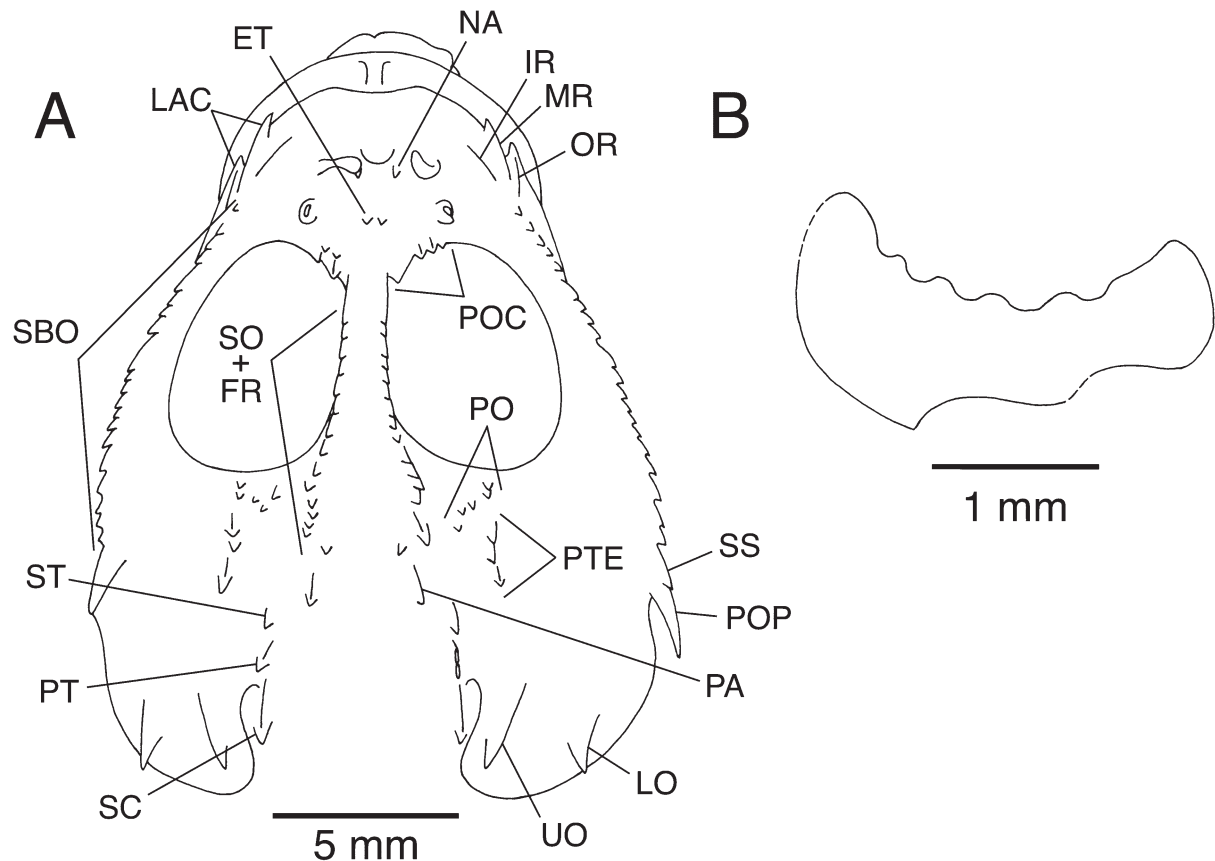


FIGURE 3. Dorsal view of head (A) and iris lappet (left eye) (B) in *Onigocia sibogae*, lectotype, ZMA 112434, 51.2 mm SL, collected from Ceram Sea, northwest of New Guinea. ET, ethmoid spine; FR, frontal spine; IR, inner ridge of lachrymal; LAC, lachrymal spine; LO, lower opercular spine; MR, middle ridge of lachrymal; NA, nasal spine; OR, outer ridge of lachrymal; PA, parietal spine; PO, postocular spine; POC, preocular spine; POP, preopercular spine; PT, posttemporal spine; PTE, pterotic spine; SBO, suborbital spine; SC, supracleithral spine; SO, supraorbital spine; SS, supplemental preopercular spine; ST, supratemporal spine; UO, upper opercular spine.

Weber (1913) presented a drawing of *P. grandisquamis* Weber in size of 1.5 times of a specimen (fig. 108), which well agree with *Onigocia* in having serrated suborbital ridge and fewer number of lateral line scales. However, he did not indicate its actual size. The size of the drawing is ca. 106 mm; and thus, the specimen is calculated to be in ca. 71 mm TL, although Weber (1913) showed the range of specimen TL as “27–68 mm”. Therefore, ZMA 124954, the syntype identical with *O. grandisquama* Regan, cannot be the specimen used for the drawing because its SL is much smaller 40.2 mm. Total lengths of ZMA 112434 and ZMA 124953, the remaining syntypes identical with *Onigocia*, are unmeasurable because of damaged caudal fins. Based on 16 specimens of non-types of *O. sibogae*, having measurable total length, the following regression line showing relationship of TL and SL is obtained: $y(TL) = 1.2182x(SL) + 2.6629$. Accordingly, TL of ZMA 112434 and ZMA 124953 are calculated as ca. 65 mm and 68 mm, respectively; and thus, it can be assumed ZMA 124953, the largest syntype, to be probably used for the drawing of *P. grandisquamis* Weber.

ICZN (1999: Rec. 74B) states that “other things being equal, an author who designates a lectotype should be given to a syntype of which an illustration has been published”. As discussed above, ZMA 124953 is probably the illustrated syntype of *P. grandisquamis* Weber. However, in ZMA 124953, the condition of the pelvic fin color is poor (characteristic spots in this species mostly faded in ZMA 124953 vs. the spots still retained in ZMA 112434). In addition, ZMA 112434 has I+VII dorsal spines, which is the typical number of the spines in *O. sibogae*, whereas ZMA 124953 possesses I+VIII spines, which is also found only in two non-type specimens (Table 1). Thus, the two syntypes are not equal in character condition and, this does not satisfy ICZN (1999: Rec. 74B) for the designation of the lectotype from an illustrated syntype. Therefore, ZMA 112434, being conspecific with probably illustrated ZMA 124953 and having better species characteristics of *O. sibogae*, is designated as the lectotype.

TABLE 1. Comparison of counts and proportional measurements of *Onigocia sibogae* **nom. nov.**

	Lectotype ZMA 112434	Paralectotype ZMA 124953	Non-types 20 specimens
SL (mm)	51.2	53.5	39.1–70.9
Counts:			
First dorsal fin rays	I+VII	I+VIII	I+VII–VIII (VII in 18 specimens, VIII in 2)
Second dorsal fin rays	11	11	11–12 (11 in 19, 12 in 1)
Anal fin rays	11	11	10–11 (10 in 2, 11 in 18)
Pectoral fin rays (upper, unbr.+middle, br.+lower, unbr.)	2+9+9=20	?+?+?=21	2+8–11+8–11=19–21 (19 in 1, 20 in 8, 21 in 11)
Pelvic fin rays	I, 5	I, 5	I, 5
Branched caudal fin rays	–	–	8
Pored scales in lateral line (with spine)	30 (3)	30 (3)	30–31 (2–3)
Scale rows above lateral line slanting downward and backward	–	–	29–31
Scale rows above lateral line slanting downward and forward	–	–	29–31
Scales between second dorsal fin and lateral line	3 (2 large, 1 small)	3 (2 large, 1 small)	3 (2 large, 1 small)
Gill rakers	0+4=4	0+4=4	0–1+4–5=4–5 (0+4 in 15, 1+4 in 4, 0+5 in 1)
Proportional measurements (% SL):			
HL	40.4	40.6	38.6–43.5
Predorsal length	38.3	40.2	36.9–40.9
Length of first dorsal fin base	20.3	22.2	16.4–22.2
Length of second dorsal fin base	26.2	25.0	22.7–26.7
Length of anal fin base	27.7	28.2	24.3–29.7
Caudal peduncle length	10.5	9.7	9.0–11.0
Caudal peduncle depth	5.5	5.2	4.5–5.6
Snout length	10.7	10.5	9.8–11.1
Orbital diameter	12.9	12.9	11.4–13.8
Upper jaw	15.6	15.9	15.0–16.9
Lower jaw	–	21.7	20.2–23.2
Interorbital width	2.5	2.2	2.0–3.0
Pectoral fin length	–	–	16.2–19.3

continued next page

TABLE 1. (continued)

	Lectotype ZMA 112434	Paralectotype ZMA 124953	Non-types 20 specimens
Pelvic fin length	28.7	28.4	25.8–30.6
Caudal fin length	–	–	23.1–28.7
Length of first spine of first dorsal fin	–	7.7	6.0–8.7
Length of second spine of first dorsal fin	–	–	13.8–17.2
Length of first ray of second dorsal fin	–	16.4	15.0–17.4
Length of first anal fin ray	9.6	–	8.2–10.3
Proportional measurements (% HL):			
Snout length	26.6	25.8	24.3–27.0
Orbital diameter	31.9	31.8	29.3–32.2
Upper jaw	38.6	39.2	36.6–40.6
Lower jaw	–	53.5	50.5–55.6
Interorbital width	6.3	5.5	4.9–7.5

Comparison. Data used for the following comparison is from Knapp (1986, 1999), Imamura & McGrouther (2008), Imamura & Knapp (2009) and this study.

The following seven valid species of the genus *Onigocia* are known at present: *Onigocia bimaculata* Knapp, Imamura & Sakashita, 2000, *Onigocia grandisquama* (Regan, 1908), *Onigocia lacrimalis* Imamura & Knapp, 2010, *Onigocia macrolepis* (Bleeker, 1854), *Onigocia oligolepis* (Regan, 1908), *Onigocia pedimacula* (Regan, 1908) and *O. spinosa* (Temminck & Schlegel, 1843). *Onigocia sibogae* differs from the congeners, except for *O. bimaculata*, in having usually I+VII dorsal spines (vs. usually I+VIII in others). It is easily separable from *O. macrolepis*, *O. spinosa* and *O. grandisquama* in having eight caudal fin rays, no ocular flap and upper iris lappet usually finely crenate (vs. having nine or more caudal fin rays, an ocular flap and upper iris lappet shortly branched in the three species). *Onigocia sibogae* also differs from *O. macrolepis* in having 2–5 preocular spines (vs. one in *O. macrolepis*) and no notch on the suborbital ridge below the eye (vs. having notch), and from *O. spinosa* in having 30–31 lateral line scales, anterior two or three scales with a spine (vs. 34–42 lateral line scales, anterior 7–27 scales with spine in *O. spinosa*). The present species can be distinguished from *O. bimaculata* in lacking an interopercular flap (vs. having it in *O. bimaculata*), *O. lacrimalis* in having two or three antrorse lachrymal spines (vs. lacking them in *O. lacrimalis*) and from *O. oligolepis* in having upper iris lappet usually finely crenate and suborbital ridge serrated by 16–26 small spines, tending to increase with growth (vs. upper iris lappet slightly bilobed and suborbital ridge with 15 spines in *O. oligolepis*) (Fig. 4).

Onigocia sibogae is most similar to *O. pedimacula* in having usually 11 dorsal and anal fin rays, eight caudal fin rays, 30–31 lateral line scales, three scales between the second dorsal fin and lateral line, no ocular flap and 2–5 preocular spines. It fits into *O. pedimacula* when using a key to species from the western and central Pacific presented by Knapp (1999). According to Knapp (1999), *O. pedimacula* is widespread, from off Natal, South Africa to Karachi, Maldives, the South China Sea, the Philippines, Irian Barat (Indonesia), northwestern shelf of Australia, Timor and Arafura Seas, Great Barrier Reef, Guadalcanal and Tonga. However, the holotype of *O. pedimacula* from Maldives and non-type specimens from the western Pacific are different in the numbers of small spines on the inner ridge of the lachrymal (3 in holotype vs. usually 0–1, rarely 2 in western Pacific population) and those on the suborbital ridge [22 (right) and 25 (left) vs. 12–20, tending to increase with growth] (Fig. 5), and color of the pelvic fin (with a large distinct brownish spot on middle vs. with indistinct dark area on middle, contra Knapp, 1999). The western Pacific population might belong to a different species from *O. pedimacula*; and thus, *O. sibogae* is separately compared with them here.

Onigocia sibogae differs from the holotype of *O. pedimacula* in having usually no spines on the inner ridge of the lachrymal (vs. with three spines in latter). The present species differs from the western Pacific population in having a larger number of small spines on the suborbital ridge (16–26 in former vs. 12–20 in latter, both tending to increase with growth). In addition, *O. sibogae* is distinguished from the holotype and western Pacific population in having usually I+VII dorsal spines and 2–4 distinct blackish spots on the middle and posterior portions of the pel-

vic fin rays (vs. I+VIII dorsal spines in both, and pelvic fin with single large brownish spot in middle in the holotype and indistinct dark area in middle in the western Pacific population).

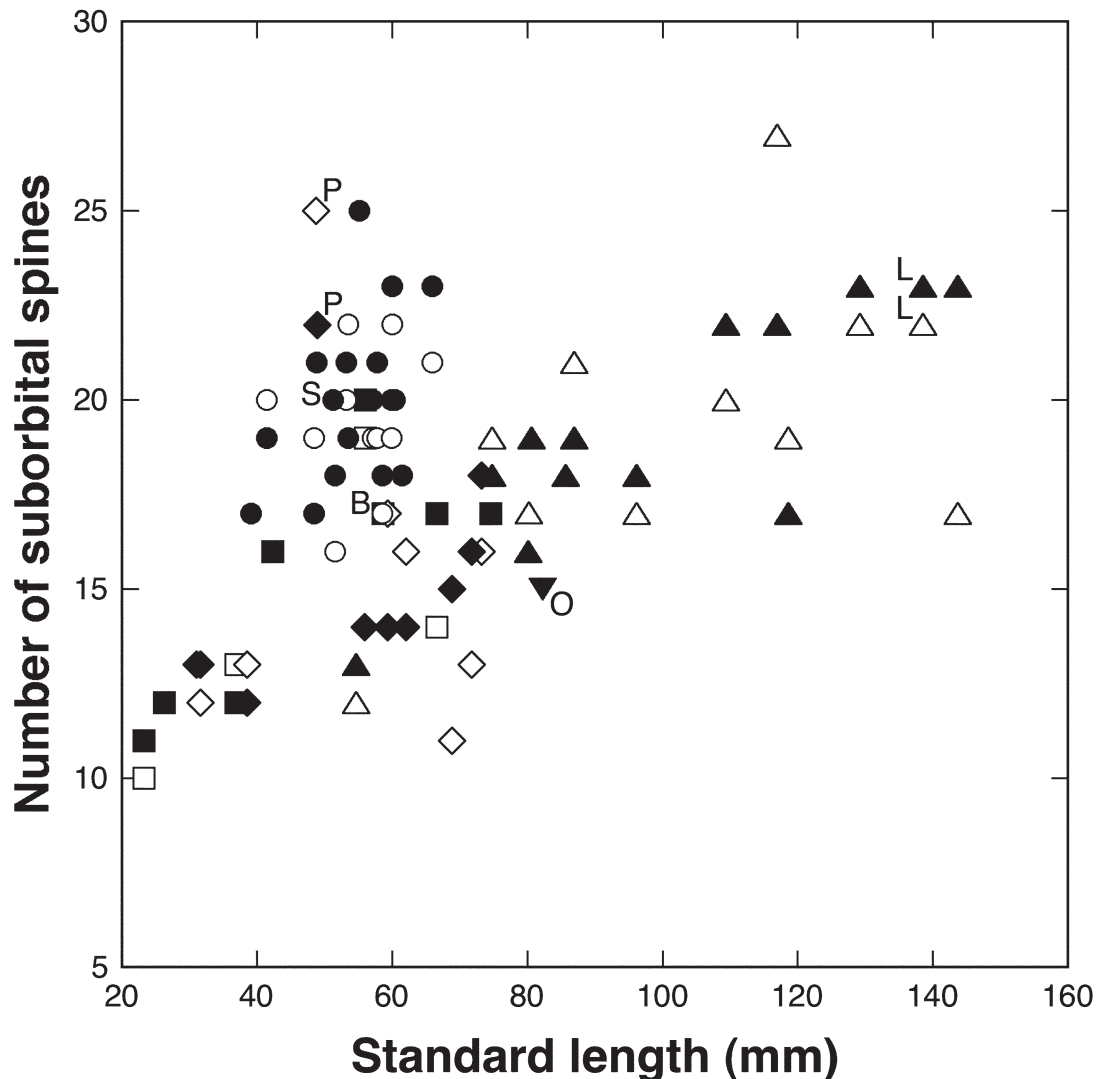


FIGURE 4. Relationship of number of suborbital spines and standard length (mm) in five species of *Onigocia* without ocular flap. Circle, *Onigocia sibogae*; square, *O. bimaculata*; triangle, *O. lacrimalis*; reversed triangle, *O. oligolepis*; rhombus, *O. pedimacula*; open symbols (including western Pacific population), left side; solid symbols, right side. Name baring specimens labeled by capitalized initial of specific name of each species (B, L, O, P and S).

Comparative materials. Other paralectotypes of *Onigocia sibogae* (3 specimens): ZMA 112435 (2 specimens, 32.1–53.1 mm SL, also designated as syntypes of *Platycephalus horai*, identified with *Thysanophrys celebica*), ZMA 124954 [formerly ZMA 112434, 40.2 mm SL, identified with *Onigocia grandisquama* (Regan)], coll. with lectotype of *O. sibogae*. *O. grandisquama* (Regan) (11 specimens): USNM 303744 (7 specimens, 51.1–68.7 mm SL), Mauritius; USNM 346059 (4 specimens, 50.5–71.9 mm SL), Somalia. *O. pedimacula* (?) (10 specimens): AMS I.22585-011 (1 of 3 specimens, 46.0 mm SL), Coral Sea, Australia; NSMT-P 61621 (31.0 mm SL), NSMT-P 61622 (31.6 mm SL), NSMT-P 63420 (4 specimens, 62.0–73.2 mm SL), Bitung Is., Indonesia; NSMT-P 64353 (55.9 mm SL), Ceram Is., Indonesia; NSMT-P 71370 (2 specimens, 38.5–59.3 mm SL), Ambon Is., Indonesia. *O. spinosa* (10 specimens): CAS 15237 (3 specimens, 98.3–105.3 mm SL), Formosa Strait, South China Sea; CSIRO CA1876 (64.0 mm SL), Mento Bello Islands, Australia; CSIRO H6267-01 (1 of 22 specimens, 43.7 mm SL), Nickol Bay, Australia; NTM S.15848-001 (48.8 mm SL), North West Shelf, Australia; NTM S.16716-001 (2 specimens, 70.1–79.9 mm SL), Dampier Archipelago, Australia; WAM P.28754-004 (2 specimens, 52.1–58.4 mm SL).

The other 69 specimens of *Onigocia*, including type specimens of each species, except for *O. macrolepis* lacking existent types, and deposited at AMS, BMNH, BPBM, CMNH, HUMZ, MNHN, NICA, NSMT, QM, RMNH and USNM, are listed in Imamura & Knapp (2009).

Acknowledgments.

I express my sincere thanks to L. W. Knapp (USNM), who critically read the draft manuscript of this paper. I am deeply indebted to M. Aizawa (formerly Coastal Branch of CMNH; now Biological Laboratory, Imperial Household), G. Dally and R. Williams (NTM), A. Graham (CSIRO), A.-M. Hodges (formerly BMNH), T. Iwamoto and D. Catania (CAS), J. Johnson (QM), H. Larson (formerly NTM), K. Matsuura and G. Shinohara (NSMT), M. McGrouther (AMS), J. Macline (BMNH), S. Morrison (WAM), M. J. P. Oijen and J. Egmond (RMNH), P. Pruvost (MNHN), M. Sakashita (Nago, Okinawa), P. Sirimontaporn (NICA), A. Suzumoto (BPBM), R. Vonk (ZMA), J. T. Williams and L. W. Knapp (USNM), and all other staff of the fish sections of the aforementioned museums for making specimens available.

References

- De Beaufort, L.F. (1956) On a new species of *Platycephalus*. *Proceedings of the National Institute of Sciences of India*, 22 (part B), 83–85.
- De Beaufort, L.F. & Briggs, J.C. (1962) The fishes of the Indo-Australian Archipelago, Vol. 11. Scleroparei, Hypostomides, Pediculati, Plectognathi, Opisthomi, Discocephali, Xenopterygii. *E.J. Brill, Leiden*, vi + 481 pp.
- Eschmeyer, W.N. (1998) Collection abbreviations. In: Eschmeyer W.N. (Ed.), *Catalog of Fishes. Vols. 1–3. California Academy of Sciences, San Francisco*, pp. 16–22.
- ICZN (International Commission on Zoological Nomenclature). 1999. International code of zoological nomenclature, 4th edn. *The International Trust for Zoological Nomenclature, London*, xxiv + 306 pp.
- Imamura, H. (1996) Phylogeny of the family Platycephalidae and related taxa (Pisces: Scorpaeniformes). *Species Diversity*, 1, 123–233.
- Imamura, H. (2008) Synonymy of two species of the genus *Platycephalus* and validity of *Platycephalus westraliae* (Pisces: Scorpaeniformes). *Ichthyological Research*, 55, 399–406.
- Imamura, H. & McGrouther, M. (2008) New records of a flathead fish, *Onigocia grandisquama* (Regan, 1908) (Teleostei: Platycephalidae) from Australia. *Memoirs of the Queensland Museum*, 52, 239–243.
- Imamura, H. & Knapp, L.W. (2009) *Platycephalus orbitalis*, a new species of flathead (Teleostei: Platycephalidae) collected from western Australia. *Zootaxa*, 2271, 57–63.
- Knapp, L.W. (1986) Family No. 155: Platycephalidae. In: Smith M.M. & Heemstra P.C. (Eds.), *Smiths' sea fishes. Springer-Verlag, Macmillan*, pp. 482–486.
- Knapp, L.W. (1999) Platycephalidae. In: Carpenter K.E. & Niem V.H. (Eds.), *FAO species identification guide for fishery purposes. The living marine resources of the western Central Pacific. Vol. 4. Bony fish. Part 2 (Mugilidae to Carangidae). FAO, Rome*, pp. 2385–2421.
- Knapp, L.W., Imamura H. & Sakashita, M. (2000) *Onigocia bimaculata*, a new species of flathead fish (Scorpaeniformes: Platycephalidae) from the Indo-Pacific. *Special Publication of the J.L.B. Smith Institute of Ichthyology*, (64), 1–10.
- Neijssen, H., van Tuijl, L. & Isbrücker, I.J.H. (1982) A catalogue of the type-specimens of Recent fishes in the Institute of Taxonomic Zoology (Zoölogisch Museum), University of Amsterdam, the Netherlands. *Verslagen en Technische Gegevens Instituut voor Taxonomische Zoölogie (Zoölogisch Museum) Universiteit van Amsterdam*, (33), 1–173.
- Weber, M. (1913) *Die fische der Siboga-Expedition. E. J. Brill, Leiden*, 710 pp.